## U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

### Gordon P. Eaton, Director

Reston, VA 20192

MINES-DATA: (703) 648-7799

MINES FaxBack: (703) 648-4999

Internet: http://minerals.er.usgs.gov/minerals

For information, contact:

Kim B. Shedd, Commodity Specialist

Telephone: (703) 648-4974, Fax: (703) 648-7757

E-mail: kshedd@usgs.gov

JoAnn Sterling (Data), (703) 648-7953

### **COBALT IN JANUARY 1997**

U.S. consumption and stocks of cobalt in January 1997 were not available in time to be included in this issue. They will be published in a subsequent issue. U.S. imports of cobalt metal and cobalt contained in chemicals during 1996 were 5% higher than imports during 1995. Exports of unwrought cobalt and cobalt contained in chemicals were 34% higher in 1996 than in 1995. Trade data for January 1997 will be available in a subsequent issue.

#### Note

With the exception of prices, all data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated by using unrounded data.

#### **Update**

On March 25, 1997, the Defense Logistics Agency (DLA) announced the results of its February 1997 cobalt offer. Five hundred tons (1.1 million pounds) of cobalt metal with a cobalt content of 97.0% to 98.9% were available under a negotiated bid basis. The DLA awarded approximately 500 tons at an estimated provisional value of \$18 million to the following companies: OMG Americas, Inc. of Cleveland, OH; Phoenixx International Resources, Inc. of Carnegie, PA;

The Hall Chemical Co. of Wickliffe, OH; Voss Metals Co., Inc. of Rockford, IL; Glencore Ltd. of Stamford, CT; The Shepherd Chemical Co. of Cincinnati, OH; S. Wilkoff & Sons Co. of Cleveland, OH; and Minor Metals, Inc. of Fort Lee, NJ. The cobalt sale scheduled for March 31, 1997, was postponed until further notice. For further information, please contact June Olmstead, DLA's contracting officer for cobalt, at (703) 767-5492.

Price update, dollars per pound of electrolytic cobalt (Source—<u>Platt's Metals Week</u>):

Week ending	Price range
Feb. 14	20.25-21.50
Feb. 21	19.25-20.50
Feb. 28	19.25-20.50
Mar. 7	18.75-19.90
Mar. 14	18.75-19.25
Mar. 21	20.00-21.00

# Monthly average February

20.47

The Cobalt Development Institute released annual refinery production data for its seven member-producers:

Country	Producer	1995	1996
Canada	Inco Ltd.	1,362	1,544
	Sherritt International Corp.	1,730	2,070
Finland	OM Group Inc.	3,610	4,160
Japan	Sumitomo Metal Mining Co. Ltd.	222	228
Norway	Falconbridge Ltd.	2,804	3,099
Zaire	La Générale des Carrières et des Mines	4,146	6,110
Zambia	Zambia Consolidated Copper Mines Ltd.	2,934	4,799
Total		16.808	17.085

## $\label{eq:table 1} \textbf{TABLE 1} \\ \textbf{U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY 1}/$

(Kilograms, gross weight of material, except as noted)

Period and country	Metal	s 2/	Oxides and h	vdroxides	Salts and com	npounds 3/	Total cobalt content for	Cobalt content, year to
of origin	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/	the month 5/	date 5/6/
1995:	Quantity	, arac i,	Quantity	7 4140 17	Quantity	, arao n	uie monui e,	date or or
December	411,000	\$25,900,000	16,300	\$722,000	16.000	\$189,000	427,000	6,440,000
January-December	5,530,000	325,000,000	808,000	34,300,000	1,170,000	15,800,000	6,440,000	XX
1996:			,	, , , , , , , , ,	,,		-, -,	
January	515,000	30,000,000	33,700 7/	1,550,000 7/	276,000 8/	3,480,000 8/	613,000 r/	613,000
February	471,000 7/	30,000,000 7/	57,100	2,810,000	25,600 9/	314,000 9/	519,000 r/	1,130,000
March	540,000	36,000,000	49,800 9/	2,450,000 9/	183,000 9/	2,300,000 9/	626,000	1,760,000
April	432,000	27,500,000	147,000	6,370,000	104,000	1,340,000	566,000	2,330,000
May	475,000 7/	28,700,000 7/	62,100	2,730,000	55,200	786,000	533,000 r/	2,860,000
June	608,000 9/	36,200,000 9/	82,200	3,710,000	88,800	1,170,000	691,000 r/	3,550,000
July	590,000 7/	24,800,000 7/	93,900	4,440,000	60,200	778,000	674,000 r/	4,220,000
August	480,000	24,800,000	112,000 9/	2,160,000 9/	38,600	405,000	571,000	4,790,000
September	432,000 9/	20,500,000 9/	58,600	2,440,000	101,000	954,000	502,000	5,300,000
October	347,000	17,100,000	71,000	3,030,000	101,000	1,010,000	425,000	5,720,000
November	481,000 9/	22,000,000 9/	61,100	2,640,000	90,700	911,000	550,000	6,270,000
December:								
Australia								7,440
Austria								195
Belgium	14,200	1,010,000	26,800	1,040,000			33,600	359,000
Brazil	10,000	440,000					10,000	46,800
Canada	58,000	2,770,000	8,400	284,000	226	5,850	64,100	981,000
Finland	40,200	1,750,000	18,900	689,000	121,000	1,140,000	86,500	1,170,000
France	3,190	324,000	1,430	121,000			4,220	42,800
Germany	11,400	744,000	250	22,000			11,600	102,000
Hong Kong								1,750
Japan			3,290	183,000			2,370	32,900
Netherlands								13,900
Norway	208,000	9,790,000					208,000	1,710,000
Russia					33,700	200,000	15,500	651,000
South Africa								13,200
Spain								12,500
Sweden								708
Switzerland								960
United Kingdom	2,620	123,000	5,000	60,000			6,220	102,000
Zaire	12,400	642,000					12,400	396,000
Zambia	40,000	177,000					40,000	1,130,000
Total	400,000	19,400,000	64,100	2,400,000	155,000	1,340,000	494,000	6,770,000

r/ Revised. XX Not applicable.

- 1/ Data are rounded to three significant digits; may not add to totals shown.
- 2/ Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder.
- 3/ Includes cobalt sulfates, cobalt chlorides, cobalt carbonates, and cobalt acetates.
- 4/ Customs value.
- 5/ Estimated from gross weights.
- 6/ Year to date may include revisions to prior months.
- 7/ Data revised by the Bureau of the Census.
- 8/ Country reported as China was revised to Hong Kong by the Bureau of the Census.
- 9/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

 ${\it TABLE~2}$  U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

	Unwro	ught	Other coba	lt: matte,	Wrought c	obalt and
	cobalt a	lloys	waste and	scrap 2/	cobalt a	rticles
Period and country						
of origin	Quantity	Value 3/	Quantity	Value 3/	Quantity	Value 3/
1995:						
December	6,440	\$566,000	33,400	\$631,000	21,200	\$1,360,000
January-December	98,200	5,330,000	880,000	12,400,000	155,000	9,760,000
1996:						
January	5,110	414,000	30,600	452,000	10,400	563,000
February	6,810 4/	531,000 4/	89,900 4/	731,000 4/	16,000	651,000
March	1,340	107,000	71,200	1,370,000	21,800	1,410,000
April	3,940	213,000	48,700	954,000	19,000	1,270,000
May	3,970 4/	339,000 4/	34,500 4/	694,000 4/	19,800	1,270,000
June	2,630	108,000	9,060 4/	192,000 4/	13,800	1,070,000
July	4,540 4/	345,000 4/	51,000 4/	943,000 4/	12,300 4/	868,000 4/
August	8,080	313,000	84,600 4/	2,020,000 4/	10,500	676,000
September	2,310	221,000	16,800 5/	875,000 5/	12,500	878,000
October	1,330 5/	97,200 5/	48,100 5/	665,000 5/	17,500	1,020,000
November	16,000	912,000	22,600 5/	705,000 5/	9,680	714,000
December:	•					
Belgium			450	19,100		
Canada	754	44,600	11,400	31,000	386	69,700
Denmark			34 5/	3,380 5/		
Finland			27,900 5/	1,940,000 5/		
France			466 5/	44,800 5/	1,390	94,300
Germany			344	11,100		
Japan					3,230	268,000
Sweden	2,420	111,000	379 5/	50,800 5/		
Ukraine			46 5/	4,680 5/		
United Kingdom			14,700 5/	215,000 5/	10,300	665,000
Total	3,180	156,000	55,700	2,320,000	15,300	1,100,000

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

<sup>2/</sup> Includes other intermediate products of cobalt metallurgy; may include other cobalt-bearing materials from which cobalt is extracted, or from which cobalt-containing chemical compounds are manufactured.

<sup>3/</sup> Customs value.

<sup>4/</sup> Data revised by the Bureau of the Census.

<sup>5/</sup> All or part of these data have been referred to the Bureau of the Census for verification.

#### TABLE 3 U.S. EXPORTS OF COBALT MATERIALS 1/

(Kilograms, gross weight of material, except as noted)

	Unwrought cob	alt nowders					Total cobalt	Cobalt content,
	matte, waste a		Oxides and h	vdrovides	Salts and comp	ounds 3/	content for	year to
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/	the month 5/	date 5/ 6/
1995:	Quantity	varue 4/	Quantity	varue 4/	Quantity	value 4/	the month 3/	uate 3/ 0/
December	71,400	\$4,690,000	18,600	\$724,000	43,200	\$772,000	95,300	1,300,000
January-December	898,000	49,000,000	271,000	8,850,000	860,000	7,080,000	1,300,000	XX
1996:					•			
January	70,200	5,050,000	31,300	889,000	34,500	788,000	101,000	101,000
February	76,700	4,750,000	20,200	642,000	42,000	510,000	101,000	202,000
March	214,000	13,000,000	29,100	1,070,000	336,000	318,000	316,000	518,000
April	168,000	9,640,000	53,800 7/	1,470,000 7/	15,100	132,000	210,000 r/	729,000
May	145,000	6,930,000	22,700 8/	689,000 8/	20,500	346,000	166,000	895,000
June	159,000	7,500,000	13,300 8/	514,000 8/	20,600	310,000	173,000	1,070,000
July	61,500	2,760,000	30,100 8/	377,000 8/	21,200 8/	279,000 8/	88,300	1,160,000
August	88,700	3,160,000	40,000 8/	362,000 8/	26,600	292,000	124,000	1,280,000
September	58,200	2,370,000	35,600 8/	1,060,000 8/	47,800 8/	231,000 8/	95,400	1,380,000
October	50,000	2,380,000	15,900 8/	540,000 8/	31,900	104,000	69,100	1,440,000
November	84,000	3,510,000	27,400	777,000	78,100	316,000	122,000	1,570,000
December	105,000	3,340,000	54,400	1,440,000	112,000	678,000	171,000	1,740,000
January-December	1,280,000	64,400,000	374,000	9,820,000	787,000	4,300,000	1,740,000	XX

r/ Revised. XX Not applicable.

Source: Bureau of the Census.

 ${\it TABLE~4}\\ {\it U.S.~EXPORTS~OF~WROUGHT~COBALT,~COBALT~ORE,~AND~CONCENTRATES~1/2}}$ 

(Kilograms, gross weight of material, except as noted)

	Wrought o	Wrought cobalt and		e and
Period and country	cobalt a	cobalt articles		rates
of origin	Quantity	Quantity Value 2/		Value 2/
1995:				
December	9,070	682,000	1,710	2,700
January-December	485,000	17,800,000	139,000	1,610,000
1996:	_			
January	38,800	1,640,000	8,050 3/	105,000 3/
February	18,300	1,630,000	5,560 3/	337,000 3/
March	24,100	2,060,000	10,900 3/	130,000 3/
April	25,400	1,890,000		
May	18,800	1,460,000	19,300 3/	174,000 3/
June	62,000	2,150,000		
July	28,500	1,170,000	13,400 3/	496,000 3/
August	67,100	1,660,000	43,500 3/	1,050,000 3/
September	31,000	1,780,000	56,200 3/	2,250,000 3/
October	20,600	1,420,000	30,900 3/	1,260,000 3/
November	108,000	2,610,000	8,790 3/	370,000 3/
December	85,400	4,040,000	17,000 3/	629,000 3/
January-December	529,000	23,500,000	214,000	6,810,000

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> May include other intermediate products of cobalt metallurgy, and unwrought cobalt alloys.

<sup>3/</sup> Cobalt acetates and cobalt chlorides.

<sup>4/</sup> Free alongside ship (f.a.s.) value.

<sup>5/</sup> Estimated from gross weights.

<sup>6/</sup> Year to date may include revisions to prior months.

<sup>7/</sup> Data revised by the Bureau of the Census.

<sup>8/</sup> All or part of these data have been referred to the Bureau of the Census for verification.

<sup>2/</sup> Free alongside ship (f.a.s.) value.

<sup>3/</sup> All or part of these data have been referred to the Bureau of the Census for verification.